

Use Attainability Analysis

for

WBID 1437 Lindley Creek

Submitted by  
SES, Inc.

To  
Missouri Department of Natural Resources  
Water Protection Program

Date Received: October 26, 2007

**Field Data Sheets for Recreation Use Stream Surveys**

**Data Sheet A - Water Body Identification**

**I. Water Body Information** (For water body being surveyed)

Water Body Name (from USGS 7.5' quad): Lindley Creek	
Missouri Water Body Identification (WBID) Number: 1437	
8 digit HUC code: 10290107	County: Dallas
Upstream Legal Description (from Table H): T34N R20W 32	
Downstream Legal Description (from Table H): T34N R20W 20	
Number of sites evaluated: 3	
List all site numbers, listed consequently upstream to downstream: 1,2,3	

**Site Locations Map(s):** Attach a map of the entire segment with assessment sites clearly labeled.  
Mark any other items that may be of interest.

**II. Facility Information** (list all permitted discharges to the water body segment)

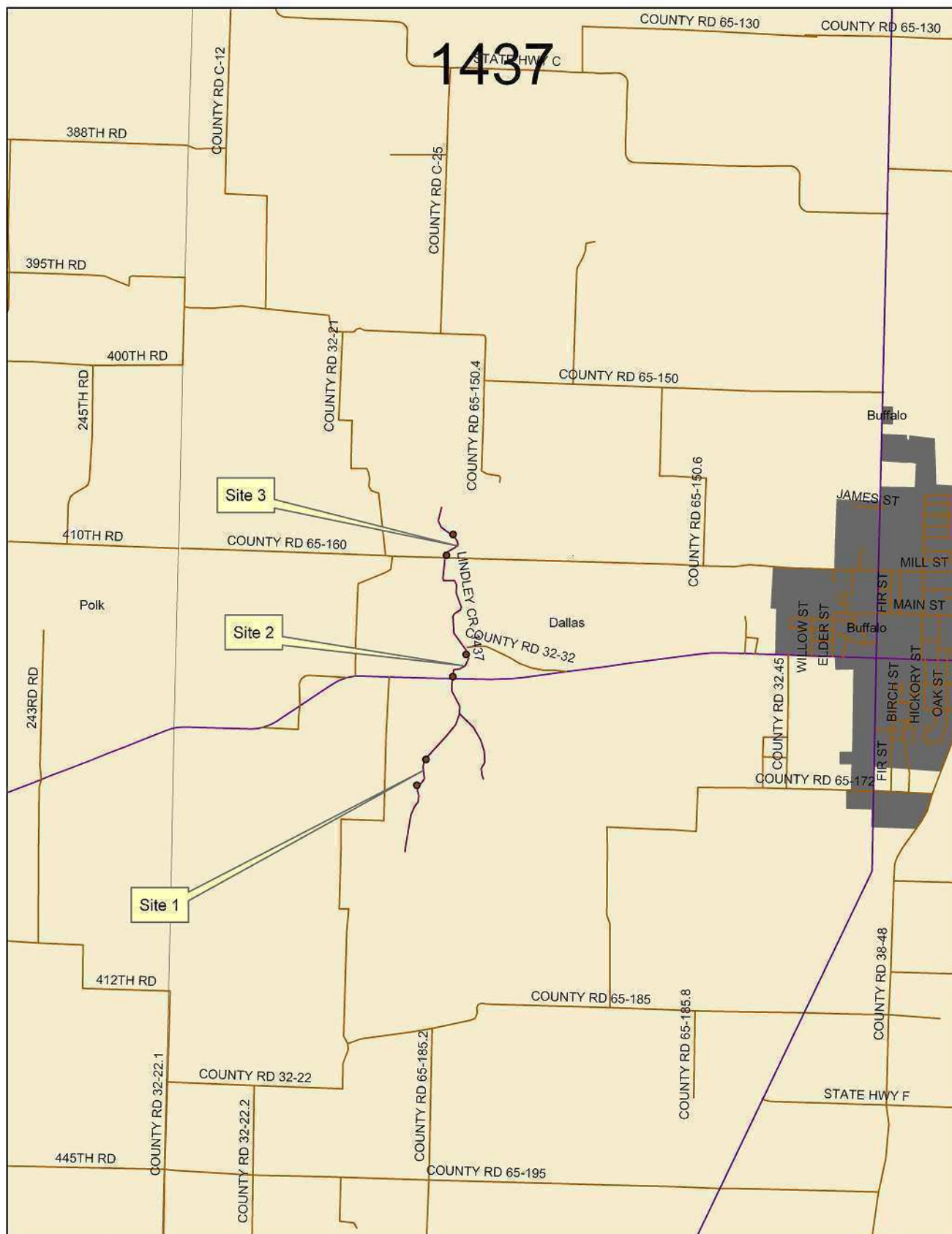
Facility Name(s) and Permit Number(s): Shady Lane MHP MO 0125717
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**III. UAA Surveyor** (please print legibly)

Name of Surveyor: Aaron Ball	Telephone Number: (913)307-0046
Organization/Employer: SES, Inc.	

**Please verify that you have completed all sections, checked all applicable boxes, and that the form is complete.**

**Signed:** Aaron Ball **Date:** 10/23/2007



WBID # 1437  
 Site # 1

### **Field Data Sheets For Recreational Use Stream Surveys**

#### **Data Sheet B-Site Characterization**

Date & Time:	10/12/07	11:00	Site Location Description (e.g. road crossing):
Personnel:	Aaron Ball, Drew Dodson		Off CR 3222
Current Weather Conditions:	clear	Facility Name:	Shady Lane MHP
Weather conditions for the past 10 days:	0.47 inches	Permit Number:	MO 0125717
Drought conditions?: No drought <input checked="" type="checkbox"/> ; Phase I <input type="checkbox"/> ; Phase II <input type="checkbox"/> ; Phase III <input type="checkbox"/> ; Phase IV <input type="checkbox"/> ; Unknown <input type="checkbox"/>			

#### **Site Location:**

Location Coordinates (Universal Transverse Mercator Projection, In Meters)					
Site 01	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy:	Meters	
	0486634	4164783		5.7	
Site 11	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy:	Meters	
	0486717	4165016		4.5	

#### **Photos:**

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
94	Upstream	95	Downstream		
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose

#### **Uses Observed:**

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water Skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other:
Describe:				

WBID # 1437  
 Site # 1

**Field Data Sheets for Recreational Use Stream Surveys**

**Data Sheet B- Site Characterization (Continued)**

**Surrounding Conditions:**

<input type="checkbox"/> City/County parks	<input type="checkbox"/> playgrounds	<input type="checkbox"/> MDC conservation lands	<input type="checkbox"/> Urban areas	<input checked="" type="checkbox"/> Rural Residential
<input type="checkbox"/> Campgrounds	<input type="checkbox"/> State parks	<input type="checkbox"/> National Forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkways
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> Fence	<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Steep Slopes	<input type="checkbox"/> Other:
Comments:				

**Evidence of Human Use:**

<input type="checkbox"/> Roads	<input type="checkbox"/> Foot path/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Rope swings
<input type="checkbox"/> RV/ATV Tracks	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle	<input checked="" type="checkbox"/> Livestock watering
comments/other:				

**Substrate:**

% Cobble	% Gravel	% Sand	% Silt	% Mud/Clay	% Bedrock
30	40				30

**Aquatic Vegetation:**

20% algae on bottom.
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**Water Characteristics:**

Odor:	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Color:	<input checked="" type="checkbox"/> Clear	<input type="checkbox"/> Green	<input type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input type="checkbox"/> Other:
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input checked="" type="checkbox"/> Fine sediments	<input type="checkbox"/> None	<input type="checkbox"/> Other:
Surface Deposit:	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:

WBID # 1437  
Site # 1

**Field Data Sheets for Recreational Use Stream Survey:**

**Data Sheet B - Site Characterization (continued)**

**Additional Stream Morphology:** (Record isolated pools or other features identified during the survey that may support recreational uses)

Channel Feature	Distance from access location (m)	Width (m)	Length (m)	Median Depth (m)	Max Depth (m)

**Comments:** (Please record any additional comments here.)

none

**Please verify that you have completed all sections, checked all applicable boxes, and that the form is complete.**

Surveyor's Signature: Aaron Ball Date of Survey: 10/12/2007

Organization: SES, Inc. Position: Field Team Leader

# Field Data Sheets for Recreational Use Stream Surveys

## Data Sheet C - Field Survey Results

Waterbody ID: <u>1437</u> Site #: <u>1</u> Lindley Creek  Estimated Channel Incision: <u>2.0</u> (m) (height between low bank width and water)  GPS Location - Easting (UTM X), Northing (UTM Y), Horizontal Accuracy Estimate (EPE / PDOP / FOM) <b>01</b> UTM X: <u>0486634</u> UTM Y: <u>4164783</u> +/- <u>5.7</u> (meters) <b>11</b> UTM X: <u>0486717</u> UTM Y: <u>4165016</u> +/- <u>4.5</u> (meters)  Average Stream Width: <u>5</u> (meters)      Length of Survey Segment: <u>150</u> (meters) (To determine Length of Reach)      (20x average stream width)  Field Staff: <u>Aaron Ball, Drew Dodson</u>	<b>Dissolved Oxygen</b>  Date: _____ Time: _____ D.O. meter Dissolved Oxygen: <u>not working</u> (mg/L)  Dissolved Oxygen: _____ (% sat)  Specific Cond: _____ (µS/cm)  Water Temperature: _____ (°C)
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### Transect Cross-Section

Station	01		02		03		04		05		06		07		08		09		10		11	
	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)
Left Bank	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0.5	0.10	0.5	0.20	0.2	0.05	0.5	0.10	0.3	0.05	0.3	0.10	0.4	0.10	0.6	0.20	0.6	0.15	0.9	0.25	0.8	0.05
2	1.0	0.10	1.0	0.25	0.4	0.10	1.0	0.10	0.6	0.05	0.6	0.15	0.8	0.05	1.2	0.30	1.2	0.10	1.8	0.60	1.6	0.10
3	1.5	0.20	1.5	0.50	0.6	0.10	1.5	0.15	0.9	0.05	0.9	0.20	1.2	0.05	1.8	0.35	1.8	0.05	2.7	0.70	2.4	0.20
4	2.0	0.30	2.0	0.60	0.8	0.05	2.0	0.25	1.2	0.05	1.2	0.20	1.6	0.05	2.4	0.40	2.4	0.15	3.6	0.75	3.2	0.20
5	2.5	0.25	2.5	0.50	1.0	0.05	2.5	0.20	1.5	0.05	1.5	0.20	2.0	0.10	3.0	0.35	3	0.50	4.5	0.75	4.0	0.25
6	3.0	0.30	3.0	0.45	1.2	0.10	3.0	0.10	1.8	0.05	1.8	0.20	2.4	0.05	3.6	0.35	3.6	0.55	5.4	0.75	4.8	0.35
7	3.5	0.20	3.5	0.40	1.4	0.15	3.5	0.20	2.1	0.05	2.1	0.20	2.8	0.10	4.2	0.30	4.2	0.55	6.3	0.70	5.6	0.50
8	4.0	0.20	4.0	0.35	1.6	0.10	4.0	0.15	2.4	0.10	2.4	0.15	3.2	0.10	4.8	0.30	4.8	0.50	7.2	0.70	6.4	0.55
9	4.5	0.15	4.5	0.30	1.8	0.10	4.5	0.10	2.7	0.05	2.7	0.15	3.6	0.10	5.4	0.15	5.4	0.30	8.1	0.50	7.2	0.55
Right Bank	5.0	0.00	5.0	0.00	2.0	0.00	5.0	0.00	3.0	0.00	3.0	0.00	4.0	0.00	6.0	0.00	6.0	0.00	9.0	0.00	8.0	0.00
Feature Type (riffle, run, or pool)	pool		pool		pool		pool		pool		pool		pool		pool		pool		pool		pool	

Notes: Transects will be measured beginning on left descending bank (0 depth) and finishing on right descending bank (0 depth). This width is the wetted width

GPS locations corresponds to Transect 01 and 11. Transects ordered in upstream to downstream order.

Depth measurements taken at 10 equally spaced locations along transect (determine by dividing wetted width by ten)

Mark dry depth measurements as 0; record actual measurements to 0.01 meter unless depth is too deep to measure (then record as > 1)

All measurements to be taken to the nearest 0.01 meter.

0.75 MAXIMUM

0.20 MEDIAN

Signed: Aaron Ball      Date: 10/12/07

WBID # 1437  
 Site # 2

**Field Data Sheets For Recreational Use Stream Surveys**

**Data Sheet B-Site Characterization**

Date & Time:	10/12/07	11:20	Site Location Description (e.g. road crossing):
Personnel:	Aaron Ball, Drew Dodson		Hwy 32
Current Weather Conditions:	clear	Facility Name:	Shady Lane MHP
Weather conditions for the past 10 days:	0.47 inches	Permit Number:	MO 0125717
Drought conditions?: No drought <input checked="" type="checkbox"/> ; Phase I <input type="checkbox"/> ; Phase II <input type="checkbox"/> ; Phase III <input type="checkbox"/> ; Phase IV <input type="checkbox"/> ; Unknown <input type="checkbox"/>			

**Site Location:**

Location Coordinates (Universal Transverse Mercator Projection, In Meters)					
Site 01	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy:	Meters	
	0486961	4165766		5.7	
Site 11	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy:	Meters	
	0487081	4165966		6.0	

**Photos:**

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
96	Upstream	97	Downstream		
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose

**Uses Observed:**

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water Skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other:
Describe:				

WBID # 1437  
 Site # 2

**Field Data Sheets for Recreational Use Stream Surveys**

**Data Sheet B- Site Characterization (Continued)**

**Surrounding Conditions:**

<input type="checkbox"/> City/County parks	<input type="checkbox"/> playgrounds	<input type="checkbox"/> MDC conservation lands	<input type="checkbox"/> Urban areas	<input type="checkbox"/> Rural Residential
<input type="checkbox"/> Campgrounds	<input type="checkbox"/> State parks	<input type="checkbox"/> National Forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkways
<input type="checkbox"/> Boating accesses	<input checked="" type="checkbox"/> Fence	<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Steep Slopes	<input type="checkbox"/> Other:
Comments:				

**Evidence of Human Use:**

<input type="checkbox"/> Roads	<input type="checkbox"/> Foot path/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Rope swings
<input type="checkbox"/> RV/ATV Tracks	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle	<input checked="" type="checkbox"/> Livestock watering
comments/other:				

**Substrate:**

% Cobble	% Gravel	% Sand	% Silt	% Mud/Clay	% Bedrock
40	20				40

**Aquatic Vegetation:**

2% algae floating
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**Water Characteristics:**

Odor:	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Color:	<input type="checkbox"/> Clear	<input type="checkbox"/> Green	<input type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input checked="" type="checkbox"/> Other:
					Cloudy
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input type="checkbox"/> Fine sediments	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Surface Deposit:	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:

WBID # 1437  
Site # 2

**Field Data Sheets for Recreational Use Stream Survey:**

**Data Sheet B - Site Characterization (continued)**

**Additional Stream Morphology:** (Record isolated pools or other features identified during the survey that may support recreational uses)

Channel Feature	Distance from access location (m)	Width (m)	Length (m)	Median Depth (m)	Max Depth (m)

**Comments:** (Please record any additional comments here.)

none

**Please verify that you have completed all sections, checked all applicable boxes, and that the form is complete.**

Surveyor's Signature: Aaron Ball Date of Survey: 10/12/2007

Organization: SES, Inc. Position: Field Team Leader

# Field Data Sheets for Recreational Use Stream Surveys

## Data Sheet C - Field Survey Results

Waterbody ID: <u>1437</u> Site #: <u>2</u>  Estimated Channel Incision: <u>2.0</u> (m) (height between low bank width and water)  GPS Location - Easting (UTM X), Northing (UTM Y), Horizontal Accuracy Estimate (EPE / PDOP / FOM) <b>01</b> UTM X: <u>0486961</u> UTM Y: <u>4165766</u> +/- <u>5.7</u> (meters) <b>11</b> UTM X: <u>0487081</u> UTM Y: <u>4165966</u> +/- <u>6</u> (meters)  Average Stream Width: <u>4</u> (meters)      Length of Survey Segment: <u>150</u> (meters) (To determine Length of Reach)      (20x average stream width)  Field Staff: <u>Aaron Ball, Drew Dodson</u>	<b>Dissolved Oxygen</b>  Date: _____ Time: _____ D.O. meter Dissolved Oxygen: <u>not working</u> (mg/L)  Dissolved Oxygen: _____ (% sat)  Specific Cond: _____ (µS/cm)  Water Temperature: _____ (°C)
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### Transect Cross-Section

Station	01		02		03		04		05		06		07		08		09		10		11	
	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)
<b>Left Bank</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0.5	0.05	0.7	0.25	0.3	0.15	0.4	0.10	0.2	0.05	0.3	0.05	0.1	0.05	0.6	0.20	0.2	0.10	0.3	0.10	0.6	0.20
2	1.0	0.05	1.4	0.30	0.6	0.10	0.8	0.25	0.4	0.10	0.6	0.05	0.2	0.05	1.2	0.30	0.4	0.10	0.6	0.20	1.2	0.20
3	1.5	0.05	2.1	0.40	0.9	0.15	1.2	0.20	0.6	0.10	0.9	0.00	0.3	0.05	1.8	0.35	0.6	0.20	0.9	0.20	1.8	0.20
4	2.0	0.00	2.8	0.45	1.2	0.30	1.6	0.20	0.8	0.10	1.2	0.00	0.4	0.05	2.4	0.45	0.8	0.20	1.2	0.15	2.4	0.20
5	2.5	0.05	3.5	0.70	1.5	0.30	2.0	0.20	1.0	0.10	1.5	0.00	0.5	0.05	3.0	0.50	1	0.20	1.5	0.15	3.0	0.15
6	3.0	0.05	4.2	0.70	1.8	0.30	2.4	0.20	1.2	0.00	1.8	0.05	0.6	0.05	3.6	0.50	1.2	0.15	1.8	0.10	3.6	0.20
7	3.5	0.00	4.9	0.60	2.1	0.20	2.8	0.20	1.4	0.10	2.1	0.05	0.7	0.05	4.2	0.50	1.4	0.10	2.1	0.15	4.2	0.30
8	4.0	0.05	5.6	0.70	2.4	0.20	3.2	0.25	1.6	0.05	2.4	0.00	0.8	0.05	4.8	0.60	1.6	0.10	2.4	0.15	4.8	0.20
9	4.5	0.05	6.3	0.70	2.7	0.10	3.6	0.20	1.8	0.05	2.7	0.05	0.9	0.05	5.4	0.55	1.8	0.05	2.7	0.15	5.4	0.20
<b>Right Bank</b>	5.0	0.00	7.0	0.00	3.0	0.00	4.0	0.00	2.0	0.00	3.0	0.00	1.0	0.00	6.0	0.00	2	0.00	3.0	0.00	6.0	0.00
<b>Feature Type</b> (riffle, run, or pool)	pool		pool		pool		pool		pool		pool		pool		pool		pool		pool		pool	

**Notes:** Transects will be measured beginning on left descending bank (0 depth) and finishing on right descending bank (0 depth). This width is the wetted width

GPS locations corresponds to Transect 01 and 11. Transects ordered in upstream to downstream order.

Depth measurements taken at 10 equally spaced locations along transect (determine by dividing wetted width by ten)

Mark dry depth measurements as 0; record actual measurements to 0.01 meter unless depth is too deep to measure (then record as > 1)

All measurements to be taken to the nearest 0.01 meter.

0.70 MAXIMUM

0.15 MEDIAN

Signed: Aaron Ball      Date: 10/12/07

WBID # 1437  
 Site # 3

**Field Data Sheets For Recreational Use Stream Surveys**

**Data Sheet B-Site Characterization**

Date & Time:	10/12/07	12:15	Site Location Description (e.g. road crossing):
Personnel:	Aaron Ball, Drew Dodson		CR 65-160
Current Weather Conditions:	clear	Facility Name:	Shady Lane MHP
Weather conditions for the past 10 days:	0.47 inches	Permit Number:	MO 0125717
Drought conditions?: No drought <input checked="" type="checkbox"/> ; Phase I <input type="checkbox"/> ; Phase II <input type="checkbox"/> ; Phase III <input type="checkbox"/> ; Phase IV <input type="checkbox"/> ; Unknown <input type="checkbox"/>			

**Site Location:**

Location Coordinates (Universal Transverse Mercator Projection, In Meters)					
Site 01	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy:	Meters	
	0486961	4167053		4.5	
Site 11	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy:	Meters	
	0486904	4166865		4.5	

**Photos:**

Photo ID#	Photo Purpose	Photo ID#:	Photo Purpose	Photo ID#:	Photo Purpose
98	Downstream	99	Upstream		
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose

**Uses Observed:**

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water Skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other:
Describe:				

WBID # 1437  
 Site # 3

**Field Data Sheets for Recreational Use Stream Surveys**

**Data Sheet B- Site Characterization (Continued)**

**Surrounding Conditions:**

<input type="checkbox"/> City/County parks	<input type="checkbox"/> playgrounds	<input type="checkbox"/> MDC conservation lands	<input type="checkbox"/> Urban areas	<input type="checkbox"/> Rural Residential
<input type="checkbox"/> Campgrounds	<input type="checkbox"/> State parks	<input type="checkbox"/> National Forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkways
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> Fence	<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Steep Slopes	<input type="checkbox"/> Other:
Comments: none				

**Evidence of Human Use:**

<input type="checkbox"/> Roads	<input type="checkbox"/> Foot path/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Rope swings
<input type="checkbox"/> RV/ATV Tracks	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle	<input type="checkbox"/> Livestock watering
comments/other: none				

**Substrate:**

% Cobble	% Gravel	% Sand	% Silt	% Mud/Clay	% Bedrock
	30				70

**Aquatic Vegetation:**

Less than 2% green algae coverage
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**Water Characteristics:**

Odor:	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Color:	<input checked="" type="checkbox"/> Clear	<input type="checkbox"/> Green	<input type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input type="checkbox"/> Other:
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input type="checkbox"/> Fine sediments	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Surface Deposit:	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:

WBID # 1437  
Site # 3

**Field Data Sheets for Recreational Use Stream Survey:**

**Data Sheet B - Site Characterization (continued)**

**Additional Stream Morphology:** (Record isolated pools or other features identified during the survey that may support recreational uses)

Channel Feature	Distance from access location (m)	Width (m)	Length (m)	Median Depth (m)	Max Depth (m)

**Comments:** (Please record any additional comments here.)

none

**Please verify that you have completed all sections, checked all applicable boxes, and that the form is complete.**

Surveyor's Signature: Aaron Ball Date of Survey: 10/12/2007

Organization: SES, Inc. Position: Field Team Leader

# Field Data Sheets for Recreational Use Stream Surveys

## Data Sheet C - Field Survey Results

Waterbody ID: <u>1437</u> Site #: <u>3</u> Lindley Creek  Estimated Channel Incision: <u>2.0</u> (m) (height between low bank width and water)  GPS Location - Easting (UTM X), Northing (UTM Y), Horizontal Accuracy Estimate (EPE / PDOP / FOM) <b>01</b> UTM X: <u>0486961</u> UTM Y: <u>4167053</u> +/- <u>4.5</u> (meters) <b>11</b> UTM X: <u>0486904</u> UTM Y: <u>4166865</u> +/- <u>4.5</u> (meters)  Average Stream Width: <u>4</u> (meters)      Length of Survey Segment: <u>150</u> (meters) (To determine Length of Reach)      (20x average stream width)  Field Staff: <u>Aaron Ball, Drew Dodson</u>	<b>Dissolved Oxygen</b>  Date: _____ Time: _____ D.O. meter Dissolved Oxygen: <u>not working</u> (mg/L)  Dissolved Oxygen: _____ (% sat)  Specific Cond: _____ (µS/cm)  Water Temperature: _____ (°C)
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### Transect Cross-Section

Station	01		02		03		04		05		06		07		08		09		10		11	
	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)
<b>Left Bank</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0.3	0.10	0.1	0.05	0.9	0.15	0.7	0.05	1.0	0.20	0.2	0.05	1.1	0.30	1.2	0.30	0.4	0.05	0.3	0.10	0.5	0.15
2	0.6	0.20	0.2	0.05	1.8	0.40	1.4	0.05	2.0	0.40	0.4	0.05	2.2	0.45	2.4	0.45	0.8	0.05	0.6	0.10	1.0	0.10
3	0.9	0.20	0.3	0.05	2.7	0.60	2.1	0.20	3.0	0.40	0.6	0.05	3.3	0.40	3.6	0.50	1.2	0.05	0.9	0.20	1.5	0.20
4	1.2	0.20	0.4	0.05	3.6	0.75	2.8	0.20	4.0	0.60	0.8	0.05	4.4	0.35	4.8	0.70	1.6	0.05	1.2	0.20	2.0	0.10
5	1.5	0.20	0.5	0.05	4.5	0.75	3.5	0.30	5.0	0.90	1.0	0.05	5.5	0.35	6.0	0.65	2	0.05	1.5	0.20	2.5	0.00
6	1.8	0.15	0.6	0.05	5.4	0.70	4.2	0.50	6.0	0.85	1.2	0.05	6.6	0.40	7.2	0.50	2.4	0.05	1.8	0.20	3.0	0.10
7	2.1	0.20	0.7	0.05	6.3	0.65	4.9	0.50	7.0	0.55	1.4	0.05	7.7	0.50	8.4	0.50	2.8	0.05	2.1	0.10	3.5	0.10
8	2.4	0.10	0.8	0.05	7.2	0.55	5.6	0.45	8.0	0.30	1.6	0.05	8.8	0.30	9.6	0.40	3.2	0.05	2.4	0.15	4.0	0.05
9	2.7	0.05	0.9	0.05	8.1	0.30	6.3	0.40	9.0	0.20	1.8	0.05	9.9	0.30	10.8	0.40	3.6	0.05	2.7	0.10	4.5	0.05
<b>Right Bank</b>	3.0	0.00	1.0	0.00	9.0	0.00	7.0	0.00	10.0	0.00	2.0	0.00	11.0	0.00	12.0	0.00	4	0.00	3.0	0.00	5.0	0.00
<b>Feature Type</b> (riffle, run, or pool)	pool		riffle		pool		pool		pool		riffle		pool		pool		pool		pool		pool	

**Notes:** Transects will be measured beginning on left descending bank (0 depth) and finishing on right descending bank (0 depth). This width is the wetted width

GPS locations corresponds to Transect 01 and 11. Transects ordered in upstream to downstream order.

Depth measurements taken at 10 equally spaced locations along transect (determine by dividing wetted width by ten)

Mark dry depth measurements as 0; record actual measurements to 0.01 meter unless depth is too deep to measure (then record as > 1)

All measurements to be taken to the nearest 0.01 meter.

0.90 MAXIMUM

0.20 MEDIAN

Signed: Aaron Ball      Date: 10/12/07

**WBID# 1437**



**Site# 1 Photo ID# 94, Upstream**



**Site# 1 Photo ID# 95, Downstream**



**Site# 2 Photo ID# 96, Upstream**



**Site# 2 Photo ID# 97, Downstream**

**WBID# 1437**



**Site# 3 Photo ID# 98, Downstream**



**Site# 3 Photo ID# 99, Upstream**